

# Advanced Prostate Cancer Treatment



## What is Advanced Prostate Cancer?

Prostate cancer is often grouped into four stages.

- **Early-Stage | Stages I & II:** The tumor has not spread beyond the prostate.
- **Locally Advanced | Stage III:** Cancer has spread outside the prostate but only to nearby tissues.
- **Advanced | Stage IV:** Cancer has spread outside the prostate to other parts such as the lymph nodes, bones, liver or lungs.

## How is Advanced Prostate Cancer Treated?

There are many treatment choices for advanced prostate cancer. Which treatment to use, and when, will depend on discussions with your doctor. Here are the treatments you may want to discuss with your doctor if you are diagnosed with advanced prostate cancer.

**Hormone Therapy** is a treatment that can help lower testosterone, or hormone, levels. This therapy is also called androgen deprivation therapy (ADT). Testosterone, an important male sex hormone, is the main fuel for prostate cancer cells, so reducing its levels may slow the growth of those cells. Hormone therapy may help slow prostate cancer growth when prostate cancer has metastasized (spread) away from the prostate or returned after other treatments. Some treatments may be used to shrink or control a local tumor that has not spread. There are several types of hormone therapy for prostate cancer treatment and your doctor may prescribe a variety of therapies over time.

Surgery to remove the testicles is called orchiectomy and it stops the body from making the hormones that fuel prostate cancer.

Besides surgery, there are different types of medical hormone therapy to lower your body's production of testosterone. Once testosterone levels drop, prostate cancer cells may decrease in growth and proliferation. Types of medications include:

- **Agonists (analogues)**, or LHRH/GnRH agonists, are drugs that lower testosterone levels. When first given, agonists cause the body to produce a burst of testosterone (called a "flare"). After the initial flare, the drug tricks your brain into thinking it does not need to produce LHRH/GnRH because it has enough. As a result, the testicles are not stimulated to produce testosterone. LHRH or GnRH agonists are given as shots or as small pellets placed under the skin.
- **Antagonists** lower testosterone, but instead of flooding your body with LHRH, they help stop LHRH from binding to receptors. There is no testosterone flare with an LHRH/GnRH antagonist because the body does not get the signal to produce testosterone. Antagonists may be taken by mouth or injected (shot) under the skin, in the buttocks or abdomen.
- **Antiandrogen drugs** are taken as a pills to lower testosterone by inhibiting the androgen receptors in the prostate cancer cells. Normally, testosterone would bind with these receptors to fuel growth of prostate cancer cells. With the receptors inhibited, testosterone cannot "feed" the prostate. Using certain antiandrogens a few weeks before, or during, LHRH therapy may reduce flareups. Antiandrogens may also be used after surgery or castration when hormone therapy stops working.
- **CAB (combined androgen reducing treatment, with antiandrogens)** blends castration (by surgery or with medication) and antiandrogen drugs. The treatment



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reduces production of testosterone and can help stop it from binding to cancer cells. Surgery or taking oral drugs may be ways to lower the testosterone made by your testicles. The rest of the testosterone is made by the adrenal glands. Antiandrogen therapy blocks testosterone made by the adrenal glands.

- **Androgen synthesis inhibitors** help stop other parts of your body (and the cancer itself) from making more testosterone and its metabolites. These drugs may be taken as a pill to help stop your body from releasing the enzyme needed to make androgens in the adrenal glands, testicles and prostate tissue, resulting in reduced levels of testosterone and other androgens. Because of the way it works, this drug must be taken with an oral steroid.
- **Androgen receptor binding inhibitors** block testosterone from linking to prostate cancer. These drugs are taken as pills to inhibit the androgen receptor at multiple sites to slow down the growth of cancer cells.

**Chemotherapy** can slow the growth of cancer, reduce symptoms and extend life. Or they may ease pain and symptoms by shrinking tumors. During chemotherapy, the drugs move throughout the body. They kill quickly growing cancer cells and non-cancer cells. Often, chemotherapy is not the main therapy for prostate cancer. But it may be a treatment option for those whose cancer has spread.

**Immunotherapy** uses the body's immune system to fight cancer. It may be a choice for those who have no symptoms or only mild symptoms. If the cancer returns and spreads, your doctor may offer a cancer vaccine to boost your immune system so it can attack the cancer cells. Immunotherapy may be given to patients before chemotherapy, or it may be used along with chemotherapy.

**Bone-targeted therapy** may help those with prostate cancer that has spread to the bones as they may get "skeletal related events" (SREs). SREs include fractures, pain and other problems. If you have advanced prostate cancer or are taking hormone therapy, your provider may suggest calcium, vitamin D or other drugs for your bones. These drugs may stop the cancer, reduce SREs and help prevent pain and weakness from cancer growing in your bones. Radiopharmaceuticals are drugs with radioactivity. They can be used to help with bone pain from metastatic cancer. Some may also be used for those whose cancer has spread

to their bones or they may be offered when ADT is not working. Radiopharmaceuticals give off small amounts of radiation that go to the exact parts where cancer cells are growing.

**Radiation** uses high-energy beams to kill tumors. Prostate cancer often spreads to the bones. Radiation can help ease pain or prevent fractures caused by cancer spreading to the bone. Radiation may be given once or over several visits. The treatment is like having an x-ray. It uses high-energy beams to kill tumors.

**Active surveillance** is mainly used to delay or avoid aggressive therapy. It may be a choice for those who do not have symptoms or want to avoid sexual, urinary or bowel side effects for as long as possible. Others may choose surveillance due to their age or overall health. This method may require you to have many tests over time to track cancer growth. This lets your doctor know how things are going and prevents treatment-related side effects. This will also help you and your health care team focus on managing cancer-related symptoms.

## About the Urology Care Foundation

The Urology Care Foundation is the world's leading urologic foundation – and the official foundation of the American Urological Association. We provide information for those actively managing their urologic health and those ready to make health changes. Our information is based on the American Urological Association resources and is reviewed by medical experts. To learn more, visit the Urology Care Foundation's website, [UrologyHealth.org/UrologicConditions](https://UrologyHealth.org/UrologicConditions).

## Disclaimer

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